

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
10 July 2003 (10.07.2003)

PCT

(10) International Publication Number  
**WO 03/055838 A1**(51) International Patent Classification<sup>7</sup>: **C07C 67/05**,  
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(21) International Application Number: PCT/GB02/05455

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(22) International Filing Date: 4 December 2002 (04.12.2002)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,  
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

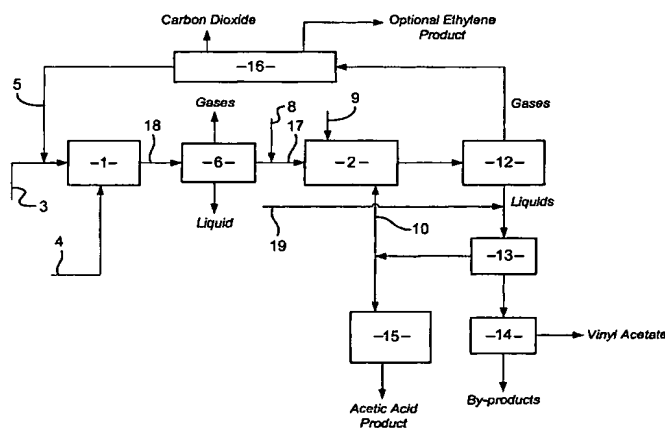
(30) Priority Data:  
0200021.4 2 January 2002 (02.01.2002) GB(71) Applicant (*for all designated States except US*): **BP  
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Finsbury Circus, London EC2M 7BA (GB).(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,  
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

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[Continued on next page]

(54) Title: INTEGRATED PROCESS FOR THE MANUFACTURE OF ALKENYL CARBOXYLATES



(57) Abstract: An integrated process for the production of an alkenyl carboxylate, such as vinyl acetate which process comprises the steps of (a) contacting in an oxidation reaction zone a C<sub>2</sub> to C<sub>4</sub> alkane, such as ethane, a molecular oxygen-containing gas, optionally the corresponding alkene and optionally water, in the presence of a catalyst to produce a stream comprising alkene, carboxylic acid and water; (b) separating at least a portion of the stream from step (a) into a fraction comprising the alkene and a fraction comprising the carboxylic acid and water; (c) contacting in a second reaction zone at least a portion of said alkene fraction produced in step (b), a carboxylic acid and a molecular oxygen-containing gas, in the presence of a catalyst to produce a product stream comprising an alkenyl carboxylate, water and carboxylic acid; (d) separating at least a portion of the product stream from step (c) and at least a portion of the carboxylic acid and water fraction produced in step (b) by azeotropic distillation into an overhead fraction comprising the alkenyl carboxylate and a base fraction comprising the carboxylic acid; (e) recovering the alkenyl carboxylate from the overhead fraction separated in step (d).

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*

- *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

- *with international search report*

**(48) Date of publication of this corrected version:**

18 September 2003

**(15) Information about Correction:**

see PCT Gazette No. 38/2003 of 18 September 2003, Section II

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*